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Event shape variables measured using multijet final states in proton - proton collisions at $\sqrt{s}=13$ TeV (Article) (Open Access)

Sirunyan, A.M.^a, Tumasyan, A.^a, Adam, W.^b, Ambrogio, F.^b, Asilar, E.^b, Bergauer, T.^b, Brandstetter, J.^b, Dragicevic, M.^b, Erö, J.^b, Escalante Del Valle, A.^b, Flechl, M.^b, Frühwirth, R.^{b,gv}, Ghete, V.M.^b, Hrubec, J.^b, Jeitler, M.^{b,gv}, Krammer, N.^b, Krätschmer, I.^b, Liko, D.^b, Mädlener, T.^b, Mikulec, I.^b, Rad, N.^b, ...

View additional authors

^aYerevan Physics Institute, Yerevan, Armenia
^bInstitut für Hochenergiephysik, Wien, Austria
^cInstitute for Nuclear Problems, Minsk, Belarus

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Abstract

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The study of global event shape variables can provide sensitive tests of predictions for multijet production in proton - proton collisions. This paper presents a study of several event shape variables calculated using jet four momenta in proton - proton collisions at a centre-of-mass energy of 13 TeV and uses data recorded with the CMS detector at the LHC corresponding to an integrated luminosity of 2.2 fb⁻¹. After correcting for detector effects, the resulting distributions are compared with several theoretical predictions. The agreement generally improves as the energy, represented by the average transverse momentum of the two leading jets, increases.[Figure not available: see fulltext.] © 2018, The Author(s).

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